

MILTON AND SITTINGBOURNE

(MEDICAL OFFICER)

JOINT DISTRICT.

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ANNUAL REPORT

ON THE

Health and Sanitary Condition, etc.

OF THE

RURAL DISTRICT OF MILTON,

FOR THE YEAR 1906,

BY

T. BARRETT HEGGS, M.D.,

MEDICAL OFFICER OF HEALTH.

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SITTINGBOURNE:

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1907.

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TOWN HALL, SITTINGBOURNE,

FEBRUARY 13, 1907.

TO THE MILTON RURAL DISTRICT COUNCIL.

Mr. Chairman and Gentlemen,

I beg to present herewith my Annual Report for the year 1906. For the statistical figures during the 4 months previous to my taking over the duties of your Medical Officer (April 25, 1906), I am indebted to Dr. Neil Robson, your late Medical Officer. This Report includes the vital statistics, the particulars of the sanitary work during the past year, and some suggestions for the future. In thus presenting the facts and figures in fuller detail we are able to produce a record of permanent value to the district. For the bearing of the work of this rural district upon the work of the conjoined three districts I must refer you to my annual reports to that Joint Committee and to the Joint Hospital Board.

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE DISTRICT.

Milton Rural District constitutes the largest portion of and its boundaries are identical with the Milton Registration District in the North-East of Kent. It is bounded on the West, South, and East by the Medway, Hollingbourne, and the Faversham Unions, and on the North by the Rivers Swale and Medway. Much of the land on the North and North-West is marsh land, and is intersected by Creeks, the chief being Milton Creek. From this low-lying marsh land the district rises toward the South, reaching an elevation of 200-300 feet above sea level in Bredgar Parish.

The Rural District contains 16 Parishes, which surround on all sides the Urban districts of Sittingbourne and Milton, situated in the North-East portion of the Registration district.

The Parishes are typically agricultural except those bordering the Swale and Creeks where brick-making and cement-making have caused aggregations of urban population in the portions of these parishes near the Creeks.

Geologically chalk is the formation throughout the district, overlaid with patches of brick earth and gravel. There are extensive alluvial deposits bordering on the Swale and Creeks. This is particularly so in Rainham Parish on the extreme West, in Murston on the North-East, adjoining and practically continuous with Sittingbourne, and in Upchurch and Lower Halstow Parishes.

Industries are agricultural (chiefly fruit and hops) and brick and cement-making (with mud or clay digging) with their adjuncts, the barge industries consisting chiefly of London refuse and some manure carriage.

Roads.—There are over 17 miles of main roads, and of private streets over 101 miles. The main roads are generally in good condition, but the private roads (which are not yet taken over by the Council) in the more populous parts, particularly in Rainham, are in very bad condition.



## INFLUENCE OF OCCUPATIONS UPON THE PUBLIC HEALTH.

In the brick trade as carried on throughout this neighbourhood (manufacture of the Kent stock brick), "London refuse," consisting of street sweepings, rags, tins, ashes, and general dry house refuse is used extensively. Brought from London in barges, it is deposited in huge mounds on the banks of the Creeks; in some few cases it is carted into the town and deposited within 50ft. of dwelling houses.

It is then sifted two or three times, until the heavier material is sifted away and the fine dust remains, which latter is used as fuel for the burning of the bricks. It is during this process of sifting that the offensive smell from this material is greatest. There is no doubt that continued exposure to such offence as is experienced by those living in dwellings close to such heaps predisposes to illness. Epidemics of sore throat have, I am informed, followed immediately after fresh consignments of this material; in fact, medical men have been enabled in a neighbouring Urban District to trace the route of passage of such material through the streets by the occurrence of cases of septic sore throat.

The following precautions should be taken:—

1. The crude or unsifted London refuse being only deposited well out from the town away from dwellings, and the mounds to be covered over with a few inches of earth.

2. The sifting to be done on such a spot well away from dwellings and only the completely sifted fine material to be allowed to be carted through the streets, or to be deposited near dwellings. The carts when carriage through streets is necessary, should be completely covered in.

## HOUSE ACCOMMODATION.

In the more populous parish a few cases of overcrowding have been discovered during the year, but generally the accommodation is sufficient. The dwellings, which are mostly cottage property, are of brick with slate roofs, some few wooden and thatched dwellings remain. Rain water pipes very often terminate several feet from the ground and the intended water butt being absent, soaked walls at these places are common. Frequently separate accommodation is not made for the rain water, but it flows into the house water cesspool, which latter therefore quickly fills and overflows at each storm. This circumstance was most frequently found at Rainham, for which Parish I have advised a system of main drainage, which would obviate the above defects.

Back yards are frequently badly paved and a great number of them have been remedied during the year. The surroundings to the cottages are often very dirty, there being no public scavenging and few ashpits, and the house refuse in some of the parishes is kept in untidy heaps against the outhouses. In the more particularly rural parishes nuisances from this and from privies and cesspools are much less frequently seen, it being customary here for the tenant to dig the refuse and excrement into his garden.

Generally there is a sufficiency of open space about the houses.

During the year only one cottage in use was found not fit for human habitation. This was closed by agreement with the owner.

The supervision over the erection of new houses is satisfactory, very few new buildings, however, have been erected during the year.

No action has been taken under the Housing of the Working Classes Act.

## SEWERAGE AND DRAINAGE.

Sewerage with septic tank and bacterial bed treatment is in vogue at Murston and Newington. The results are successful.

During the year I submitted to you a special report on the need of a system of sewerage at Rainham. Since this report the Parish Council of Rainham have decided to apply for Urban Powers. In consequence, the Council have postponed discussion of this report sine die.

Excrement disposal in the other Parishes is by the crude form of privy pit, sometimes not bricked or poorly bricked and badly covered (several such have been repaired during the year) or cesspools from trapped pans generally hand-flushed. Closet accommodation for cottage property has been found in several cases during the year inadequate, and this defect has been remedied.

Cesspools were often found unventilated or ventilation pipes of too small a bore. Ventilation in privies was often inadequate. There are no privy middens in the district.

House drainage is generally into unlined cesspools, but in many cases no house drains are provided, the waste water being thrown on the garden. Overfull cesspools were very frequently found.

Except in quite recent property the sink waste pipe opens directly over the gully—one or two cases of such pipes connecting directly with the cesspool were found.

## REFUSE DISPOSAL.

There is no public scavenging in the district. It is urgently needed in Rainham. In Murston a private system of scavenging by the owners is in force and works very well.

There are no bye-laws in force in the district imposing this duty upon occupiers. Under Section 44 Public Health Act such bye-laws can be made and be in force in all the parishes where public scavenging is not undertaken.

## WATER SUPPLY.

A large part of the District is supplied by the Sittingbourne and the Rainham Water Works. The former supplies the following parishes, Murston, and parts of Bobbing, Newington, Borden, and Bapchild. The Rainham Works supplies Rainham, Upchurch, Hartlip, Newington, and Halstow parishes. Each of these Works supply is from a deep well, the Sittingbourne into the chalk, Rainham boring being at a depth of 900ft. into the green sand.

Chemical Analysis of the water from both these wells shows the supplies to be of exceeding purity. Sittingbourne well shows 16.7 to 16.9 degrees of hardness and Rainham well only 1.1 degrees. Both wells are by their depth and nature of surroundings generally secure from grave risks of pollution. However, periodical analyses should be made, as in this way pollution can be detected at an early stage, especially if chemical analyses be supplemented by a bacteriological one.

The Southern Parishes of Bredgar, Borden, Tunstall, Milsted, and Bapchild will soon be supplied by the Mid-Kent Water Company, so that a large number of wells will thus be dispensed with.

In other Parishes (as Iwade) wells form the only supply, and here the supply is often deficient.

Wells are often found in dangerous proximity to cesspools and privy pits, and the surface about the wells is generally entirely unprotected from the washing in of dirt by



the rain. During the year several wells were closed where the chemical analysis of the water showed sewage pollution.

In Rainham parish this dangerous proximity being common, a special notice as below was posted throughout that Parish:—

MILTON RURAL DISTRICT  
WATER SUPPLY  
OF THE  
PARISH OF RAINHAM.

—  
WARNING!

“ Householders are warned of the great danger of using the water from their wells for drinking and cooking purposes. Many of the wells of the district are liable to serious contamination through the use of some of them as refuse pits. Very serious illness is often caused by drinking such contaminated water.

COMMON LODGING - HOUSES.

There are none in the District.

SLAUGHTER - HOUSES.

Most of these throughout the District are now on a satisfactory basis, and in Rainham are in general conformance with the by-laws in force in this Parish.

There are 9 Slaughter-Houses in the district as follows:—Rainham 3, Newington 1, Bapchild 1, Borden 1, Halstow 1, Bredgar 1, Upchurch 1.

During the year sanitary improvements were found necessary in all of these as follows:—Paving in 2, and drainage 4; lairage paving in 4, and lairage drainage in 4; receptacles required in 2, and other defects 2.

All the requirements were carried out. I found the occupiers generally willing to improve their premises upon the lines indicated. No new Slaughter-House has been erected. To a small extent beasts have been killed in a rural slaughter-house and the meat sold in a neighbouring urban district. This demonstrates the need for the enforcement of sanitary requirements in rural as well as urban slaughter-houses. Improvement can yet be made in general cleanliness and the more frequent use of limewash.

DAIRIES, COWSHEDS, & MILKSHOPS.

In the Milk Trade in the District are registered by the Council 29 men as Cow-keepers, 26 as Dairymen, and 33 as Purveyors of Milk. The Cowsheds are situated as follows:—Bobbing 5, Borden 3, Bredgar 2, Halstow 2, Hartlip 3, Iwade 1, Milsted 3, Murs-ton 2, Rainham 6, Rodmersham 1, and Newington 1. The following sanitary improvements were required during the year to fulfil the Dairy Regulations in force:—Shed paving in 12, shed draining in 19, ventilation and other in 15. In 6 of the 29 Cowsheds no structural improvements were required. One premises used as Cowshed was visited by a Committee of the Council and declared unfit for the trade. The occupier was given six months' notice to dispose of his cows.

Two new Cowsheds have been built in Bobbing Parish, the one with accommodation for 40 cows and built on up-to-date lines.

Milk Stores were often found indoors and communicating with living rooms.

An explanatory memorandum on the modern Cowshed and Dairy requirements was drawn up and a copy sent to each Cowkeeper and Dairyman in the district. Advice is given in this for a hygienic milking routine, as well as in structure of cowshed, cooling, etc., of milk, and the legal requirements. There is need of great improvement in the Milk trade in the general cleanliness of Cowsheds and particularly in the milking routine.

Most of our milk is sold locally, some is sent to Gillingham.

In only three of the largest Dairy Farms (60, 40, and 20 cows) is a water cooling apparatus used—this should be in all. In very few was there evidence of systematic and careful cleansing of the udders before milking, and in very few any provision for the milkers washing their hands. The absence of good water supply handicaps several Dairies as to cleansing of the sheds, etc. The milk vessels are generally clean. I understand that the local Police are quite active in the discharge of their duties under the Sale of Food and Drugs Act.

#### BAKEHOUSES.

These are with one or two exceptions retail Bakehouses, and were generally found in a satisfactory condition. Limewashing occasionally was needed.

#### OFFENSIVE TRADES.

There is a small Fat Extracting Works on the foreshore at Lower Rainham. Offensive smell from these premises has been complained of, but not recently.

#### FACTORIES AND WORKSHOPS AND WORKPLACES.

Two notices of occupation of new Workshops were received during 1906.

There are 22 Workshops and Work Places in the whole Rural District, including 6 brickfields and the premises connected therewith.

#### HOME WORK.

In answer to our local advertisement of Oct. 30, 1906, setting forth the legal obligation under the Home Work Section of the Factory and Workshops Act, no addresses of outworkers or home workers were received.

### VITAL STATISTICS.

#### POPULATION.

During 1906 considerable emigration from this neighbourhood took place, though chiefly from the Urban Districts. I have endeavoured, however, to obtain as nearly as possible correct estimates of the population in the following way:—The total number of houses occupied and unoccupied at the last census are known; also the number of new houses built since; and through the courtesy of Mr. Turner, of Sittingbourne, the number of unoccupied houses at the half-year, March-September, has been ascertained from the rate book. This method of using our local knowledge will be found more correct than the Registrar-General's method of estimation, by which an increase of population during 1906 is estimated:—

Year .....	1881		1891		1901		1906
							Estimated
Population .....	11,195	..	11,453	..	12,123	..	13,053

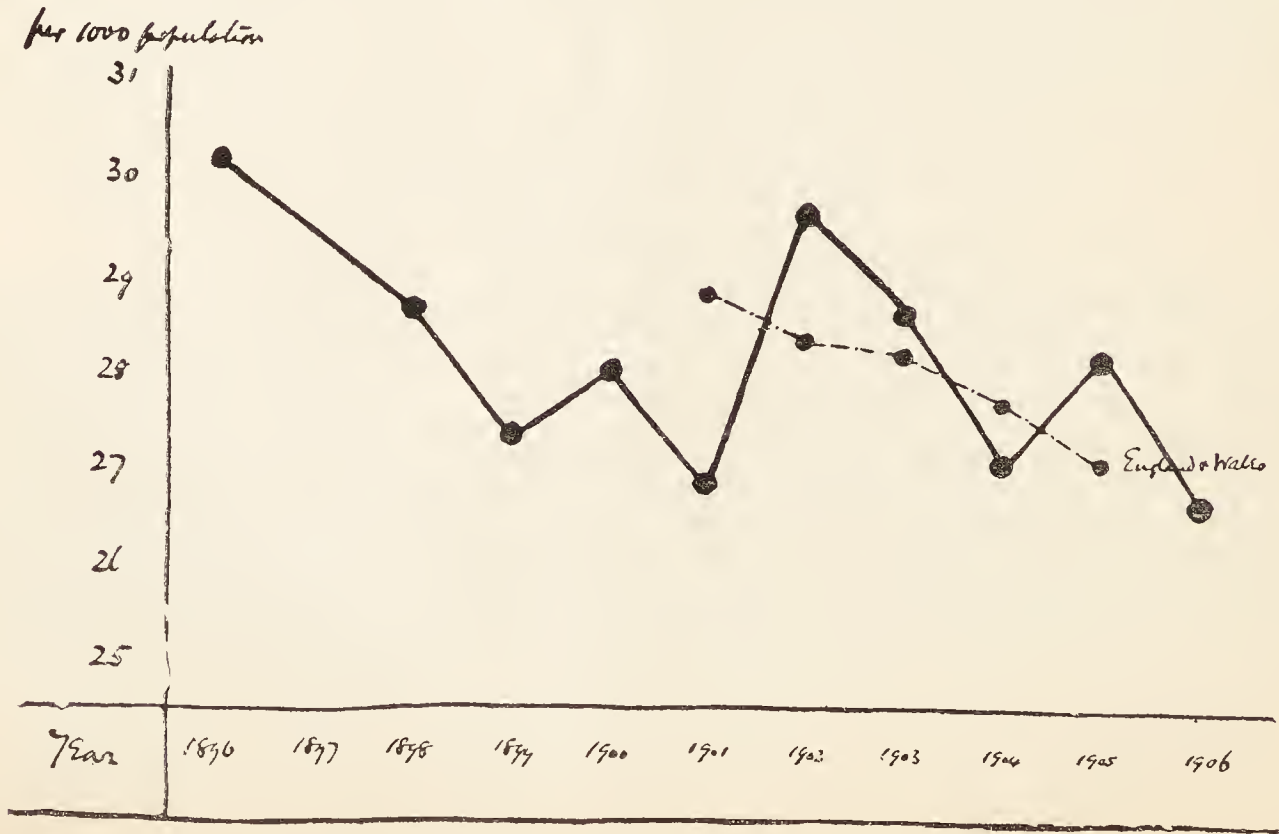
Parish	Empty Houses,		Empty Houses,		New Houses,		Persons per house,		Popu- lation,	Estimated Population,	
	1901		1906		1901-1906		1901		1901	1906	
Bapchild .....	3	..	4	..	Nil	..	4.66	..	421	..	416
Bobbing .....	—	..	6	..	—	..	4.66	..	555	..	527
Borden .....	12	..	13	..	4	..	4.66	..	1270	..	1256
Bredgar .....	9	..	4	..	1	..	4.66	..	498	..	526
Hartlip .....	6	..	1	..	—	..	4.66	..	360	..	383
Halstow .....	20	..	6	..	6	..	4.66	..	645	..	738
Iwade .....	2	..	6	..	—	..	4.66	..	232	..	214
Kingsdown ....	—	..	—	..	—	..	4.66	..	73	..	73
Milsted.. .....	2	..	2	..	—	..	4.66	..	206	..	206
Murston .....	24	..	8	..	? 70	..	4.66	..	962	..	1320
Newington ....	4	..	4	..	7	..	4.66	..	1072	..	1105
Rainham .....	18	..	29	..	80	..	4.66	..	3688	..	4009
Rodmersham ..	3	..	5	..	—	..	4.66	..	385	..	376
Tong .....	5	..	3	..	1	..	4.66	..	357	..	372
Tunstall .....	—	..	1	..	2	..	4.66	..	270	..	275
Upchurch .....	12	..	12	..	6	..	4.66	..	1229	..	1257

BIRTHS.

During 1906 there were 351 births registered, making a rate of 26.8 per 1,000 popu-  
lation, a decline upon last year.

2.

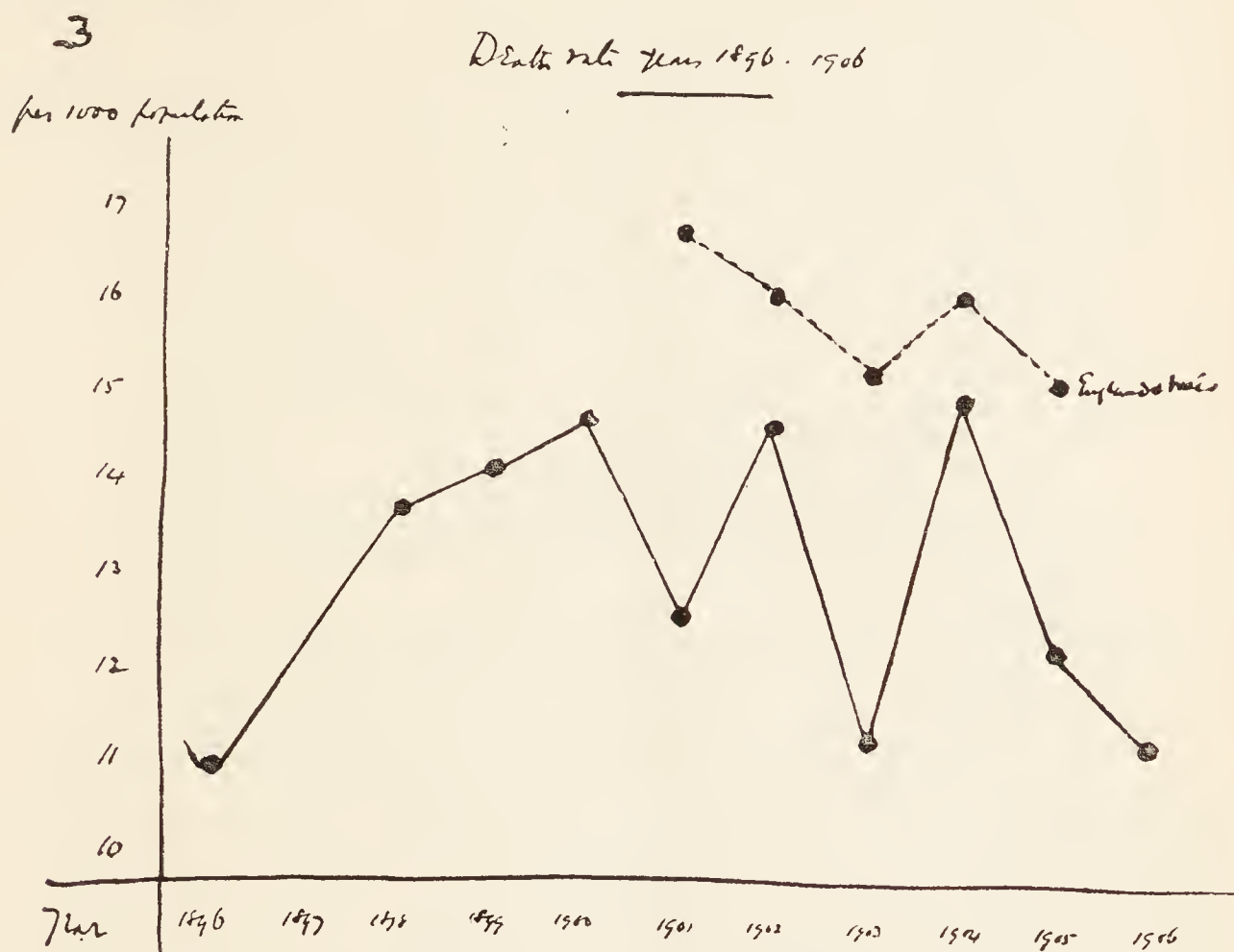
*Birth rate - Years 1896-1906.*





## DEATHS.

During 1906 there were 138 deaths registered in the District, 16 deaths occurred of residents registered in Public Institutions beyond the District, 11 at Milton Workhouse, and 5 at Chartham Asylum; also of 14 total deaths in Public Institutions in the District (Keycol Hill Hospital) 6 were of non-residents in the district, making the net number of deaths 148, or a death rate of 11.3 per 1,000 population. This is the lowest death rate for the district since 1896.



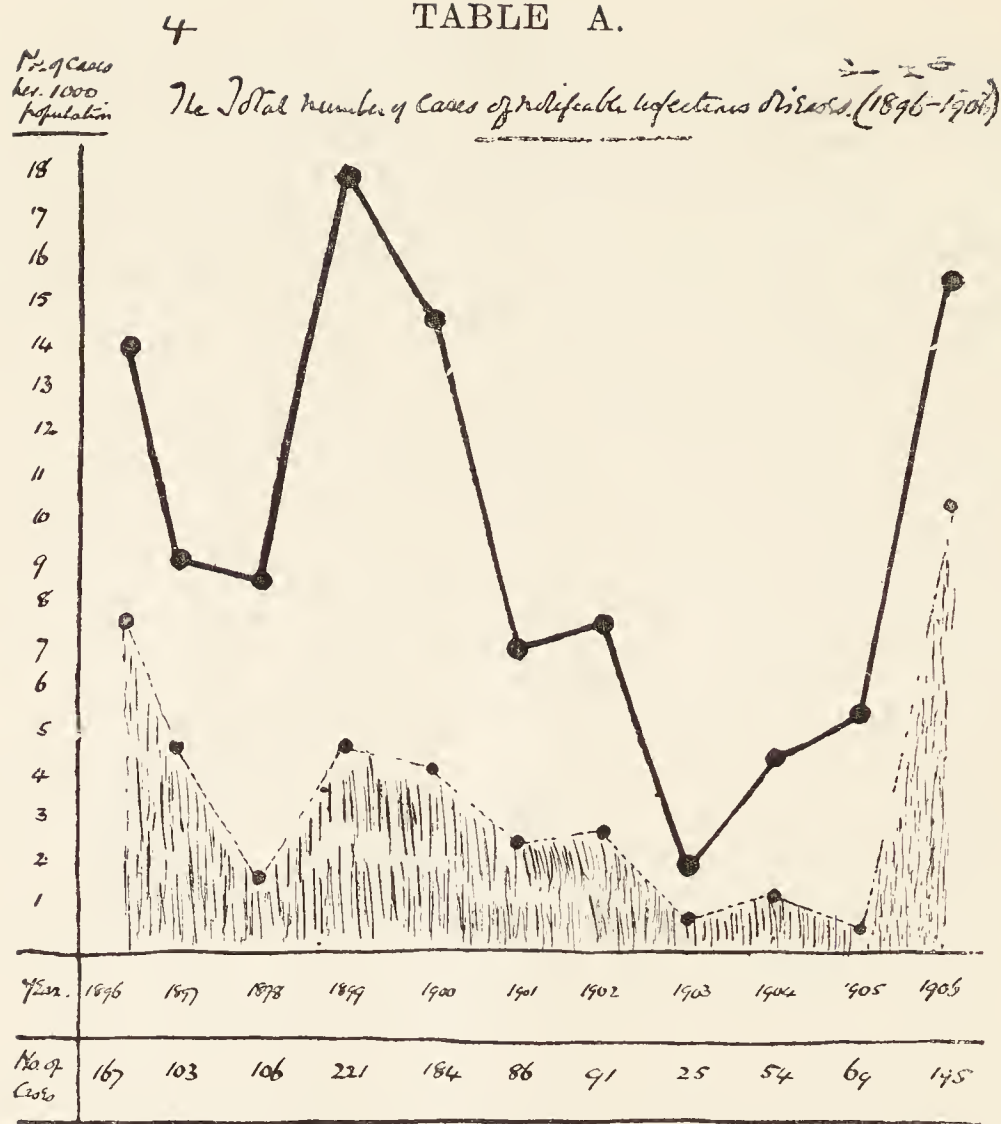
## INFECTIOUS DISEASES.

There is I regret to say a great deal of irresponsibility and ignorance among mothers as to their conduct when infectious disease enters their homes. Thus it is not uncommon for no medical aid to be sought, and although the illness ought to be recognised, yet the children are sometimes sent back to school and a number of other cases occur before the hidden case is detected. This is often done intentionally, the mother hoping thus to save the child having to be moved to Hospital.

I have visited houses whence Scarlet Fever cases had that day been removed, to find the other children allowed by their parents to be playing in the public road, to the evident danger of their playmates. Often owing to an outbreak at a school a peeling convalescent case of Scarlet Fever was found, the mother on enquiry would admit having seen a rash and knew that her child had been fevered with a sore throat, and yet no medical aid was sought, and the child in a day or so sent back to school. It is only by a gradual process of education that these conditions can be altered.

The total number of infectious cases which have occurred yearly during the last 11 years is seen in the Table A in the form of a curve. The great rise during 1906 was due to the epidemic of Scarlet Fever at Rainham.

TABLE A.



The part which each Parish has played in the production of the above totals is seen in the following Table B:—

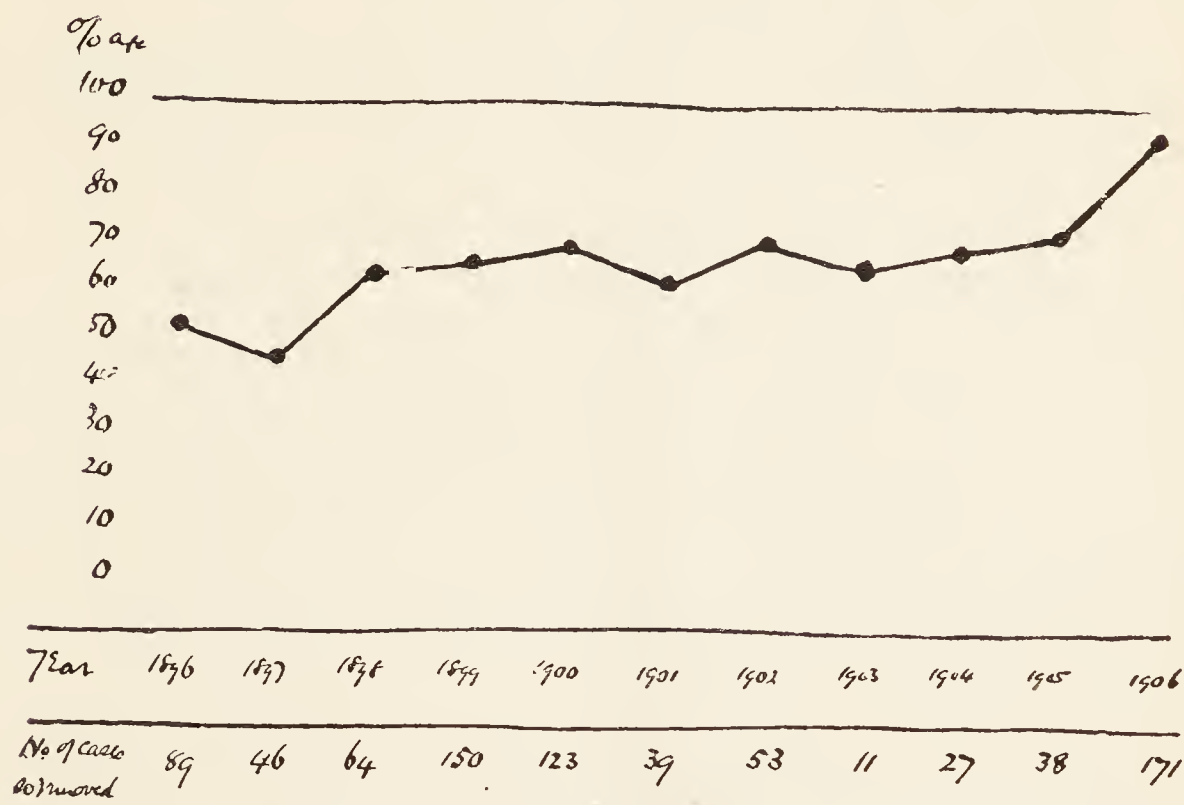
Total number of NOTIFICATIONS OF INFECTIOUS DISEASE in each Parish during the years 1896-1906.

Parish	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Bapchild.....	7	2	—	5	5	2	2	—	—	1	1
Bobbing .....	2	—	7	7	11	1	5	1	5	6	5
Borden .....	2	2	9	15	16	7	6	—	4	8	2
Bredgar .....	—	—	2	{ 14D.14S } 28	—	3	1	—	1	5	1
Halstow .....	2	2	4	5	19	5	—	—	5	2	7
Hartlip .....	31	2	1	5	1	2	2	2	2	—	—
Iwade .....	4	—	3	1	2	8	1	—	1	—	—
Kingsdown....	2	—	—	—	—	2	1	2	—	2	2
Milsted .....	—	—	3	—	3	2	—	—	—	1	2
Murston .....	1	6	5	{ (17D) 22 }	{ (12T) 14 }	5	13	6	16	{ (11D) 25 }	8
Newington....	3	7	{ (26S) 30 }	{ (44S) 56 }	20	1	2	1	2	4	9
Rainham .. { (50S,31D)(26S,18D)	90	57	18	(45S) 60	(29D) 51	31	(25S.P) 35	8	16	5	(114S) 128
Rodmersham	—	11	3	1	1	1	4	1	—	6	—
Tong .....	2	—	2	1	—	0	8	—	—	2	—
Tunstall .....	4	—	1	—	7	2	—	—	—	1	—
Upchurch ....	15	6	13	15	34	14	11	4	2	1	(26S) 30

Where the total is high, the number from any one disease is given in brackets:—  
D=Diphtheria, S=Scarlet Fever, T=Typhoid Fever, and S.P.=Small Pox.

Table VI. shows the percentage of cases removed to Hospital of the total number of infectious cases. The curve shows a gradual appreciation by the public of the benefit of Hospital Isolation and the splendid percentage of over 96 during last year speaks well of the confidence of the public in the Keycol Hill Hospital.

*The percentage of cases from the District removed to Hospital of the total cases  
of notifiable diseases usually admitted to the Hospital  
Years 1896-1906*



#### MEASLES.

The cyclical nature of epidemics of this disease is shown by the record of deaths from Measles in the District. Epidemics occurred in the following years:—In 1896 with 9 deaths, in 1899 with 4 deaths, in 1902 with 6 deaths, in 1904 with 3 deaths, and in 1906 with 1 death, which occurred at Newington.

During 1906.—On May 10 the first cases appeared in the district of Murston. The disease had spread there from the adjoining Sittingbourne district. Pamphlets of instruction to parents as below were immediately distributed to the school children to take home. In every School whenever Measles broke out these pamphlets were so distributed.

#### COPY OF PRECAUTIONS TO BE TAKEN BY PARENTS TO PREVENT THE SPREAD OF MEASLES.

##### MEASLES.

Parents are requested to watch their children closely for the early symptoms of Measles, which are:—"Severe" cold in the head, sneezing, redness of the eyes, running at the nose three days before the blotchy rash appears. Measles is extremely infectious in this early stage.

Consider every severe cold as possibly Measles, and keep the Child from School and in a separate room at home.

A Doctor should be called in promptly whenever any of the above symptoms appear.

Measles is a highly dangerous infectious disease; many of its victims die of pneumonia, and many are damaged for life with weak chests in consequence of it.



Measles is infectious for three weeks from the commencement of the symptoms. During this period the child must be kept at home, isolated in a separate room.

Parents who wilfully permit such infectious Children to mix with others are liable to a penalty of Five Pounds.

No healthy Child from a house where Measles is present should be allowed to attend Day or Sunday School during the three weeks named above.

If a second case occurs three weeks must elapse from the beginning of this case before any Child from the same house is allowed to attend School.

Note, that although Children may appear to have recovered from Measles at the end of the first week, they are infectious for two more weeks, and wilful exposure during this time renders Parents liable to prosecution.

Please write to me if any sanitary defects in your house.

The further course taken by the disease in its spread was as follows:—On May 19 a case at Bobbing School. Eventually only 4 cases occurred at this School. On May 25th Rodmersham School reported a case, eventually 17 cases occurred there, and School closure was necessary from June 13 for 3 weeks. May 29.—Newington School reported 12 cases, closure was ordered immediately, and only 3 further cases developed from the School. The closure lasted 4 weeks. Bredgar School had one case in early June; no other case occurred. Bapchild School reported a case at the end of June, and altogether 34 cases were reported here. Closure was necessary in Infant Department from July 17 for 3 weeks. Upchurch had one case and Rainham 4 cases. Murston School had 23 cases in all, and closure was necessary on June 20 for 2 weeks.

The following Table gives the number of cases reported for each School weekly, and also shows the period of closure adopted:—

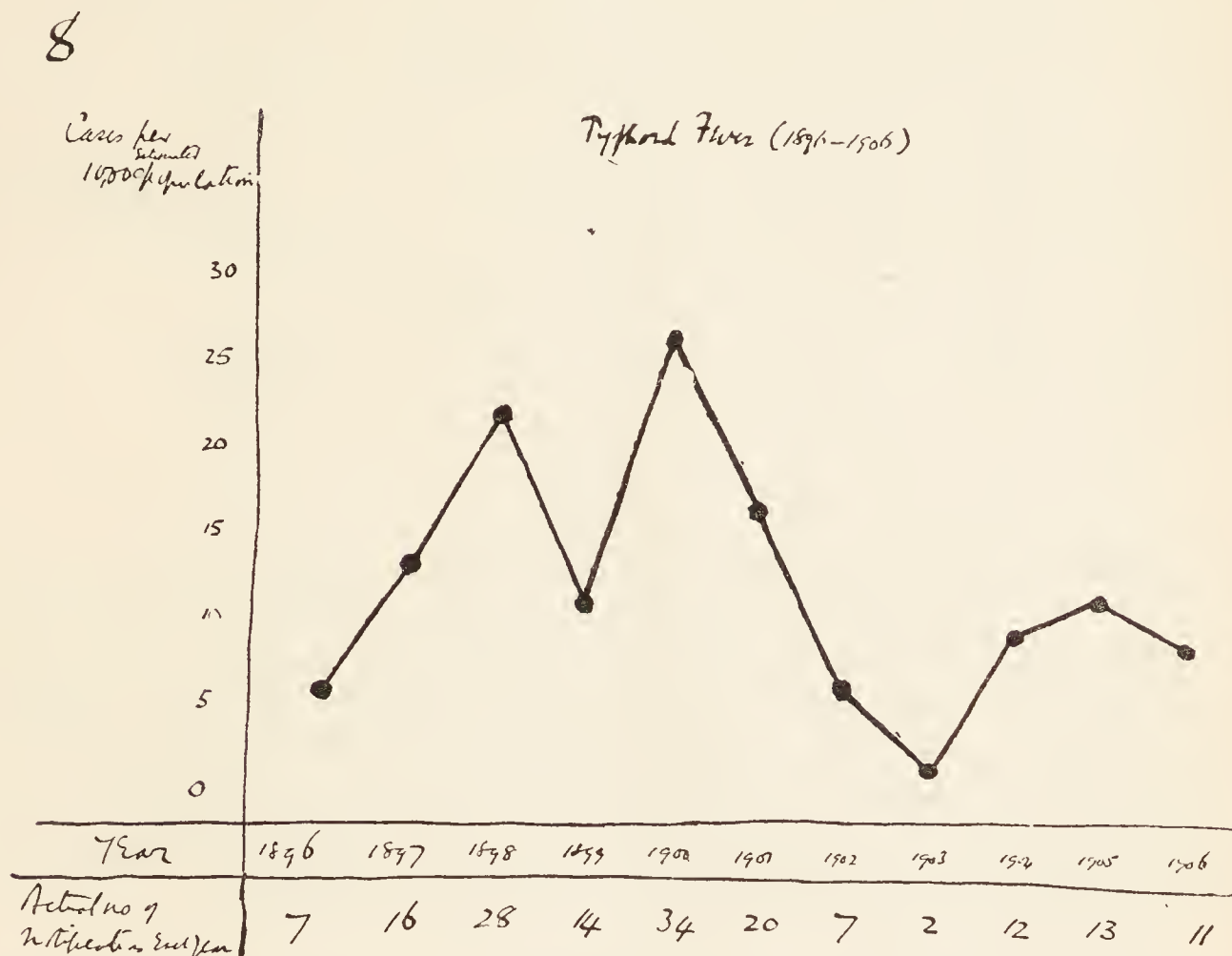
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*Epidemic Measles in the Milton Rural District Schools 1906.*  
*Showing cases reported to M.O.H from the schools & periods of closure*

School.	Week ending May 12.	19	26.	June 2.	9	16	23	30	July 7	14	21	28	Aug 4	11	18 <sup>th</sup>	Total
Murston	2		7				14									23
Bobbing		1	1				1	1								4
Newington				14						3						17
Bredgar				1	1											1
Rodmersham			1	1	3	6	3									17
Bapchild							1		4	4	11	6	4	4		34
Upchurch							1									1
Rainham							4									4
Total Cases	2	1	9	-	16	3	6	19	6	4	7	11	6	4	4	97

## TYPHOID FEVER.

The incidence of Typhoid Fever upon the District during the last 11 years is seen by the subjoined Table, wherein the actual number of notifications received each year is given, and also the number per 10,000 of the estimated population of each year, which latter set of figures is shown in the form of a curve:—



During 1906 the total number of notifications of Typhoid Fever received was 11. It is noticeable that with the exception of 2 cases at Kingsdown, in which, however, the infection was imported into your district, all the cases occurred in those Parishes bordering on the Creeks, and in which the large accumulations of London refuse used for the brick trade are placed. This I am convinced is more than coincidence. Analysing the 11 cases it is seen (in Table IX.) that 2 of the cases were home-treated cases, and so did not clinically come under my notice. In one of these the source of infection was not ascertained, and in the other the patient's recent work of unloading barges of London refuse was the only suspicious fact elicited. Of the remaining 9 cases, 3 were of very doubtful nature. The remaining 6 definite cases contracted their infection probably as follows:—4 from shellfish, 1 imported, and the sixth unknown, although he worked upon a barge carrying London refuse. So that of the 6 Typhoid Fever cases, the genuineness of which I can vouch for, 4 were probably infected by shellfish, or only excluding these cases I had reasonable reason to doubt, of the remaining 8 cases, 5 were from shellfish. The Milton Creek and its smaller neighbouring Creeks, are and have been for many years grossly polluted with sewage. It is from unauthorised beds from these Creeks in the neighbourhood that the shellfish suspected were obtained. When these facts are more widely known and their inferences intelligently followed, I am confident of seeing a decline in the number of cases of Typhoid in these Parishes—(widal reaction examinations are undertaken at the Laboratory free of cost).

TABLE IX.

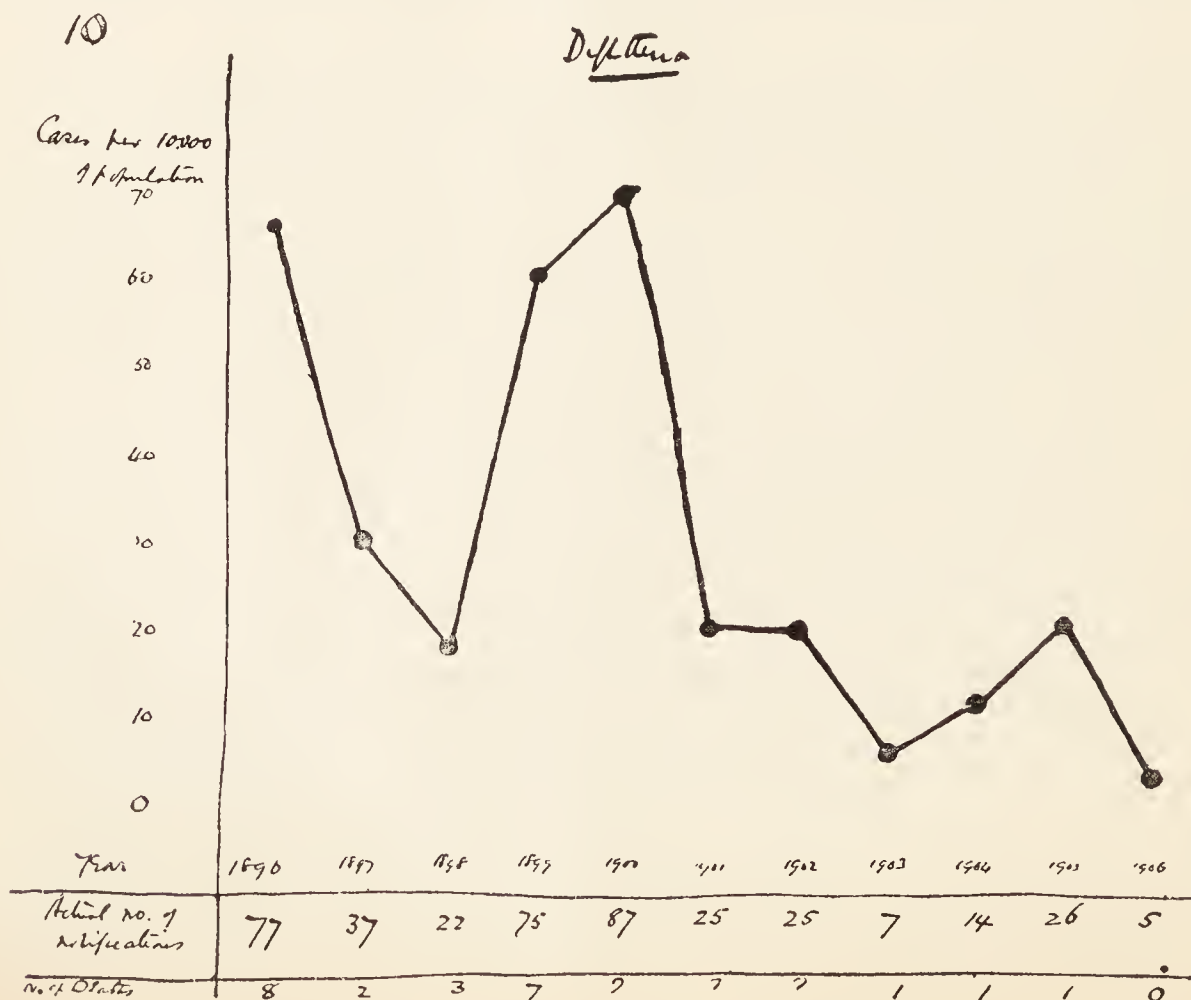
## TYPHOID FEVER.—All Notified Cases.

District	Age	Date	Definite case	Doubtful case	Probable source of Infection
1. L. Murston ..	9....	March 24			
2. Kingsdown ..	7....	May 17....	Yes.....	.....	?
3. Kingsdown ..	35....	July 8 ....	.....	Yes.....	from No. 2
4. Upchurch....	14....	July 20....	.....	Yes.....	Cockles
5. Rainham ....	35....	Aug. 9 ....	Yes.....	.....	Oysters
6. Upchurch....	35....	Sept. 3....	.....	.....	Unloading London Refuse
7. Rainham ....	14....	Sept. 12 ..	Yes.....	.....	Work on L. Refuse Barge
8. Rainham ....	35....	Sept. 9....	Yes.....	.....	Winkles
9. Upchurch ...	41....	Oct. 20....	.....	Yes.....	?
10. L. Halstow ..	30....	Dec. 1 ....	Yes.....	.....	Mussels
11. L. Halstow ..	30....	Nov. 21 ..	Yes.....	.....	Oysters

## DIPHTHERIA.

The incidence of diphtheria upon the District during the past 11 years is shown in the Table, the actual number of notifications yearly being given, and also the figures per 10,000 of estimated population, the latter being formed into a curve. The present low condition of the curve is satisfactory; the 1906 figure being the lowest yet reached.

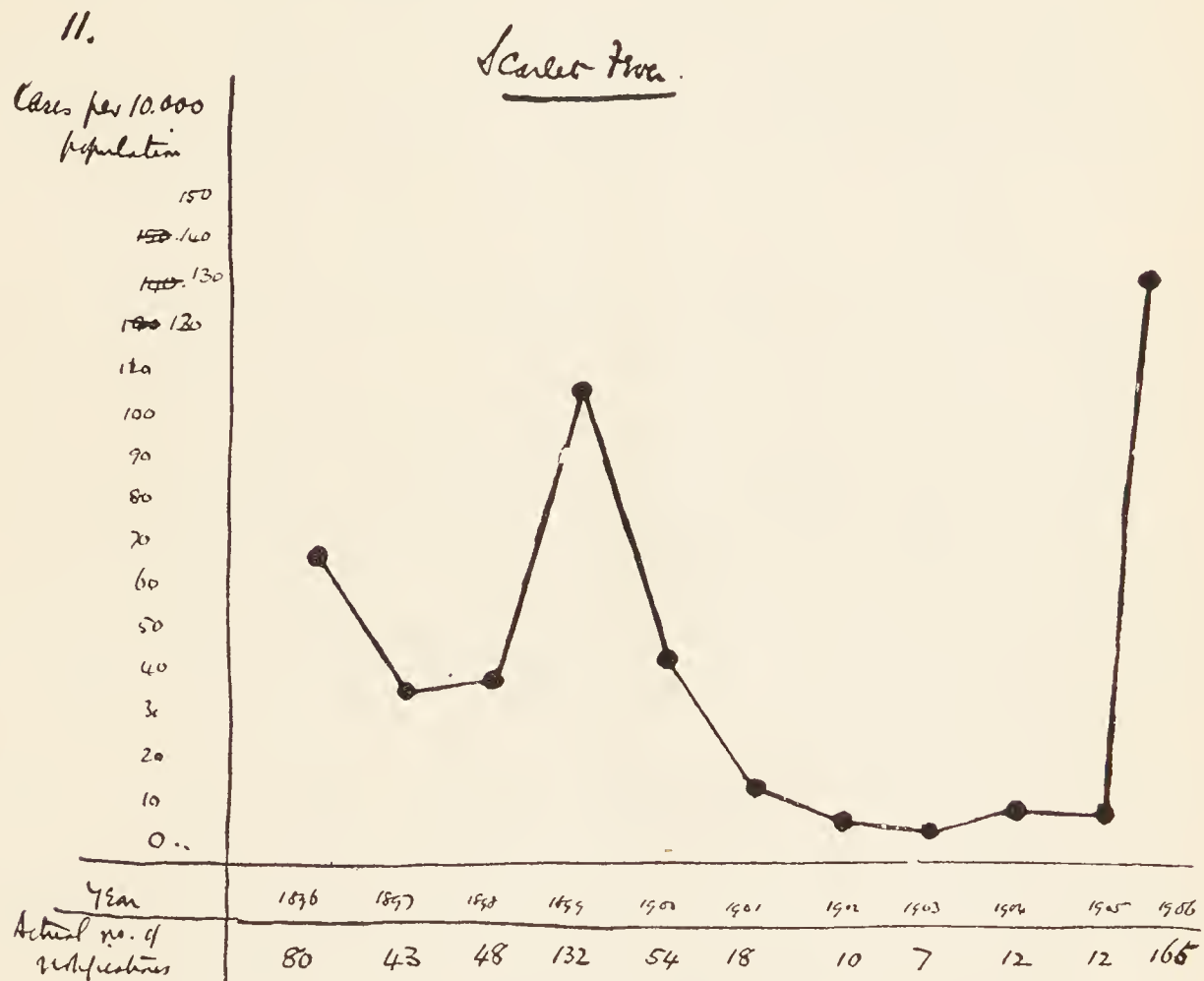
The total number of notifications during 1906 was 5. These were situated one in each of following Parishes:—Bredgar, Bobbing, Rainham, Milsted, and Bapchild. Three were treated at the Hospital and 2 at home. No death occurred during the year. Swab examinations are undertaken free of cost at the Joint Hospital laboratory.





## SCARLET FEVER.

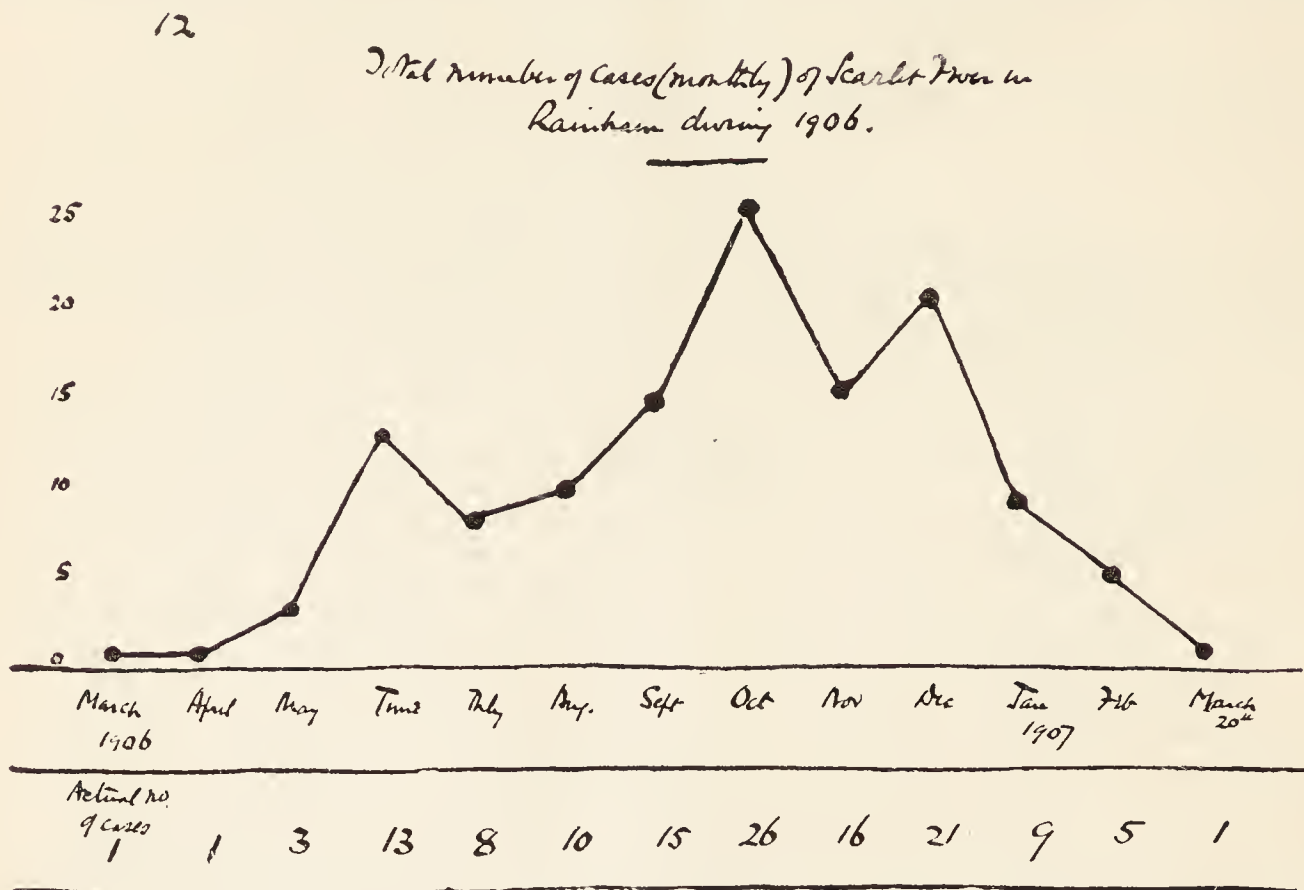
During 1906 the largest epidemic of Scarlet Fever which has visited the district for many years (certainly largest since 1896) occurred at Rainham.



Rainham lies at the extreme North-West of your District; is in close communication with the more populous districts outside your jurisdiction to the West. It is from the neighbouring districts, which also suffered severely during the year with Scarlet Fever, that the infection is supposed to have been imported to Rainham. The first case appeared in March, 1906, and an occasional case still appears in February, 1907. During 1906 114 cases of Scarlet Fever occurred at Rainham, 26 at the contiguous parish of Upchurch, 8 at Newington, 5 at Lower Halstow. All these cases (153 in 1906) belonged to the same epidemic. The mortality was small, there being only 4 deaths belonging to this epidemic, or a mortality of 2.6 per cent.

For complete details of the epidemic see Special Report presented to the Council in November, 1906.

The number of cases which occurred monthly in Rainham is shown in the table.



The epidemic necessitated the closing of the following Infant Departments: — The National Infant Department on Oct. 22 for 3 weeks, and Orchard Street and the Chapel Infant Departments for 1 week on Nov. 2. Approximately 97 per cent. of the cases were removed to the Isolation Hospital.

Apart from the above epidemic 7 cases occurred at Murston, 4 at Bobbing, and one at Borden. Two of the Bobbing cases ended fatally.

The following pamphlets were distributed to the children at the various Schools to take home to their parents as soon as cases appeared there:—

#### PRECAUTIONS TO BE TAKEN BY PARENTS. SCARLET FEVER.

Several cases of Scarlet Fever have occurred in your neighbourhood, therefore I ask your aid in preventing the spread of the disease.

Scarlet Fever begins with sore throat and feverishness, and generally with vomiting and headache; also a scarlet rash (which may only be a blush) which appears within two or three days; sometimes there are enlarged glands in the neck. A Doctor should be called in promptly whenever any of the above symptoms appear.

If a slight attack is overlooked the attack in the next child in the family may be fatal. Cases which begin mild may later on become serious and even fatal.

Carefully avoid letting your children play with children who have had sore throats, and keep your children at home if they have sore throats.

Scarlet Fever remains catching for about six weeks. Exposure during this time renders Parents liable to a penalty of £5. It is spread by infectious children playing in the streets, etc., with healthy children, and by children using the same spoons, etc.

Overcrowding and insanitary conditions favour the spread of the disease and cause the attacks to be more severe; so do not sleep too many children in the same room, and report to us any bad smells about your house.

When you know your child is suffering from Scarlet Fever, do not remove anything from the room where he is until the Disinfecting Officer arrives, when he will tell you what to do yourself with many of the infected things.

All small articles as playthings, which can be destroyed, should be burnt.

For your own sake see that other people carry out these instructions, and if not, write to me.

#### SMALL - POX.

No case of Small-Pox has been brought to my notice during 1906, although we must in this district be always prepared for the importation of the disease owing to barge traffic with London. The Small-Pox Hospital is kept ready to deal with a contingency. The increasing number of exemption from vaccination permits granted can only be noticed with positive alarm for the public safety. A repetition of the unfortunate importation in 1902 of this dreaded disease (when 32 cases occurred in your district with 4 deaths), might be accompanied by even more serious effects.

#### PUERPERAL FEVER.

Two deaths were registered from this cause during the year. This illness of childbirth is almost invariably fatal and is generally associated with insanitary conditions during the "lying in." It is astonishing that the poor often refuse to accept the protection offered them by law which clearly distinguishes for them the certified and generally trained midwife, who is supervised and inspected by the Medical Officer of Health from the untrained, unfit persons whose presence at such times is more dangerous than their absence.

#### WHOOPING COUGH.

Only one death was registered from this cause during the year. Deaths during previous years are as follows:—

1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896
1	5	2	5	4	—	?	1	2	3	1

Whooping cough is not one of the notifiable infectious diseases, consequently the actual extent of the disease is unknown. Also as this disease is not a very fatal one in itself the number of deaths gives us a poor idea. This non-fatality is a drawback in some ways, as mothers are not only often careless as to treating their children who suffer with it, but are careless as to exposing them for other children to be infected.

Several of the infectious diseases are dangerous, not so much because of their immediate fatality as because of their complications and sequelae or hidden results and after effects. Owing to this non-fatality many children are needlessly damaged for life through the carelessness and ignorance of their parents, who argue that as the disease is not likely to be fatal it is better that the children should have it and get it over. For this reason to my own knowledge in this district in some families where one child has developed one of these infectious diseases, the others who happily had escaped were deliberately placed in the same room, that they too might take the disease and so the parents save themselves the trouble of isolation. In the recent mild Scarlet Fever epidemic a not infrequent complication was heart disease, which in many cases will probably mean the loss of 5 or 10 years to the duration of life of that man or woman. Again in whooping cough as also in measles the chief after-effect is a weakness of the respiratory organs which would predispose the child to the development (if infected) of consumption, and may be the real cause of the death at a later date from pneumonia, bronchitis, or some other acute respiratory disease.



## INFANTILE DIARRHŒA.

Summer Diarrhœa, as this disease is often called, because of its most frequent occurrence at that season, is in the opinion of many investigators a specific infectious disease as Typhoid Fever (although caused by an organism as yet unknown). The infection is probably usually conveyed through the infant's food. When the ease is remembered with which milk, the chief food of a great number of infants, is made a poisonous "culture" of bacteria with their toxins, the large number of infants dying under 1 year of age is not surprising. Cow's milk is one of the best media or foods for the growth of most kinds of bacteria, and even when drawn from the cow under (comparatively speaking) good sanitary conditions and conveyed to the public in the cleanest of vessels, the number of organisms present in a teaspoonful is generally hundreds of thousands, and in the summer very often reaches many millions.

In the early part of last summer cards (as below) were distributed to the poorest parts of the more populous parishes, and I have much pleasure in speaking of the help I received in this work from the Clergy in their parishes.

## INFANTILE DIARRHŒA.

During each summer a number of Babies in the district died from Summer Diarrhœa. It is caused chiefly by the Baby's Food.

Breast-fed Babies rarely have this disease.

Breast-fed Babies have three times the prospect of reaching one year of age than hand-fed Babies.

For the first nine or ten months there is no good substitute for the mother's breast, It is very dangerous to wean your Baby during the summer months, July to September.

Never begin hand-feeding during these months.

Dirty milk and dirty bottles are the cause of Summer Diarrhœa.

In the hot weather boil all your milk as soon as you get it, and keep it in clean vessels, covered up from the dust and flies.

Never use feeding bottles with long tubes, but only boat-shaped bottles without tubes.

Never give bread or sops of any food, except milk, till Baby is seven months old.

If obliged to use Cow's milk give as follows:—

For Baby up to six weeks old: Mix one part milk with two parts water. Give four large tablespoonsful every two hours.

For Baby six weeks to three months old: Mix one part milk to one part water. Give six to eight large tablespoonsful every two-and-a-half hours.

For Baby three months to six months old: Mix two parts milk with one part water. Give eight large tablespoonsful every three hours. If you can afford it add half teaspoonful of cream to each feed.

If the milk prepared as above disagrees, use freshly-boiled barley water instead of ordinary water.

Be careful to wash the bottle clean between feeds.

If using condensed milk never buy machine-skimmed or separated milk.

Don't keep decomposing refuse near your house—put it into the covered dust bin and have it emptied each day.

If any excess of flies is caused by neighbouring manure heap, or any bad smells, report to me.

T. BARRETT HEGGS, M.D.

Milk should always be kept cool, but carefully covered to prevent the access of flies. In the hot weather all milk should be boiled on arrival.

During 1907 it is proposed to send one of the cards of instructions, as to feeding, to every home where a birth had recently occurred.

During 1906 and preceding years the number of deaths from Infantile Diarrhœa in the District has been as follows:—

Year .....	1906	1905	1904	1903	1902	1901
Deaths .....	10	12	13	5	7	14

#### ERYSIPELAS.

No death was registered for this District during 1906. Twelve cases of the disease were notified to the Medical Officer of Health.

This disease is of slight infectivity, and is not routinely admitted into the Isolation Hospital.

#### CANCER.

The deaths of 11 residents occurred from this complaint. The deaths in previous 4 years were as follows:—

Year .....	1906	1905	1904	1903	1902
Deaths .....	11	6	8	11	10

A great deal of research is being carried on to discover the cause of this complaint, but at present without definite result.

#### CHICKEN POX.

This infectious disease occurred in epidemic form in Bredgar Parish during July and August. On July 24 the Bredgar School Infant Department was closed for 17 days owing to this disease.

#### TUBERCULOSIS.

During 1906 six deaths were registered from Tuberculosis; 5 were of Phthisis or Consumption, and one among other tubercular diseases.

The number of deaths in preceding 10 years from tuberculosis were as follows (years 1896-1899 inclusive are figures for Phthisis only):—

Year .....	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896
Number of Deaths	6	25	18	13	18	10		7	7	3	6

#### CONSUMPTION (Tuberculosis of the Lungs).

This is the most infectious form of Tuberculosis. The infectivity of Consumption is becoming generally recognized, and therefore its stamping out more and more hopeful. The Council, by a resolution passed on October 23, 1906, made Consumption a voluntarily notifiable disease in their District. This is a good step towards combating the disease in this District, and it is hoped that the Practitioners will make use of this in assisting the Public Health Authorities in their effort.

The Laboratory at the Joint Hospital was opened in October last, and sputum examinations are undertaken there free of cost. This should be a help in doubtful cases.

On receipt of notification the Medical Officer of Health will himself visit the house, and if necessary offer suggestions as to the hygiene of the spit for the benefit of others in the house, of the patient, and of the general public. Needless to say care is taken that no offence is caused to the patient, and no interference with the instructions or treatment of the medical attendant. The following card is given to the patient:—



### PRECAUTIONS FOR CONSUMPTIVE PERSONS.

Consumption is, to a limited extent, an infectious disease. It is spread by inhaling the dried spit of sufferers, which floats about infected rooms as dust, and also by inhaling the spray produced when a sufferer coughs.

Never spit except into something. Never spit on to the street or any other public place. When out of doors always spit into a suitable bottle, which can be washed out with disinfectant, or into a paper handkerchief, which can be burnt. If ordinary handkerchiefs be used to spit into always put them into disinfectant or into boiling water before they have time to become dry.

There is no danger of infection except from the spit. Have wet cleansing instead of dry dusting in the home.

Sunlight and fresh air are the greatest enemies of Consumption. Always sleep in a room to yourself. Always sleep with the bedroom window open top and bottom; arrange a screen to prevent direct draught, if necessary.

Overfatigue, bad air, dust, and intemperance favour Consumption—avoid all these.

The Patient himself is the greatest gainer by the above precautions.

On the notification of a death from Consumption, the following letter is sent to the house:—

MILTON AND SITTINGBOURNE (MEDICAL OFFICER) JOINT COMMITTEE.

Sittingbourne,

.....19...

Dear.....

In connection with the death from Consumption (Phthisis) which has occurred at No. .... allow me to draw your attention to the important fact that persons are often infected with Consumption by inhaling the dust of a room occupied, or previously occupied by a patient suffering from this disease.

It is most important therefore that the following precautions be taken:—

1. All articles in the room should be cleansed with a solution of disinfectant — as Carbolic. All cleansing should be wet cleansing, as the chief danger is from the dust.

2. Strip the wall paper off the wall after soaking it with water. The paper should afterwards be burnt.

3. Thoroughly wash the floors, walls, and ceiling, with the same disinfecting solution.

4. All unwashable articles should be exposed out of doors for several hours in bright sunshine.

5. The bedding should be disinfected at the disinfecting station.

The Sanitary Inspector will call on.....to remove the bedding for complete disinfection. Kindly state time when convenient.

### TUBERCULOSIS AND MILK SUPPLY.

The Royal Commission now sitting to investigate the relationship between Bovine and Human Tuberculosis is bringing forward strong evidence that the Tuberculosis of cows is being transferred to human beings through cow's milk.

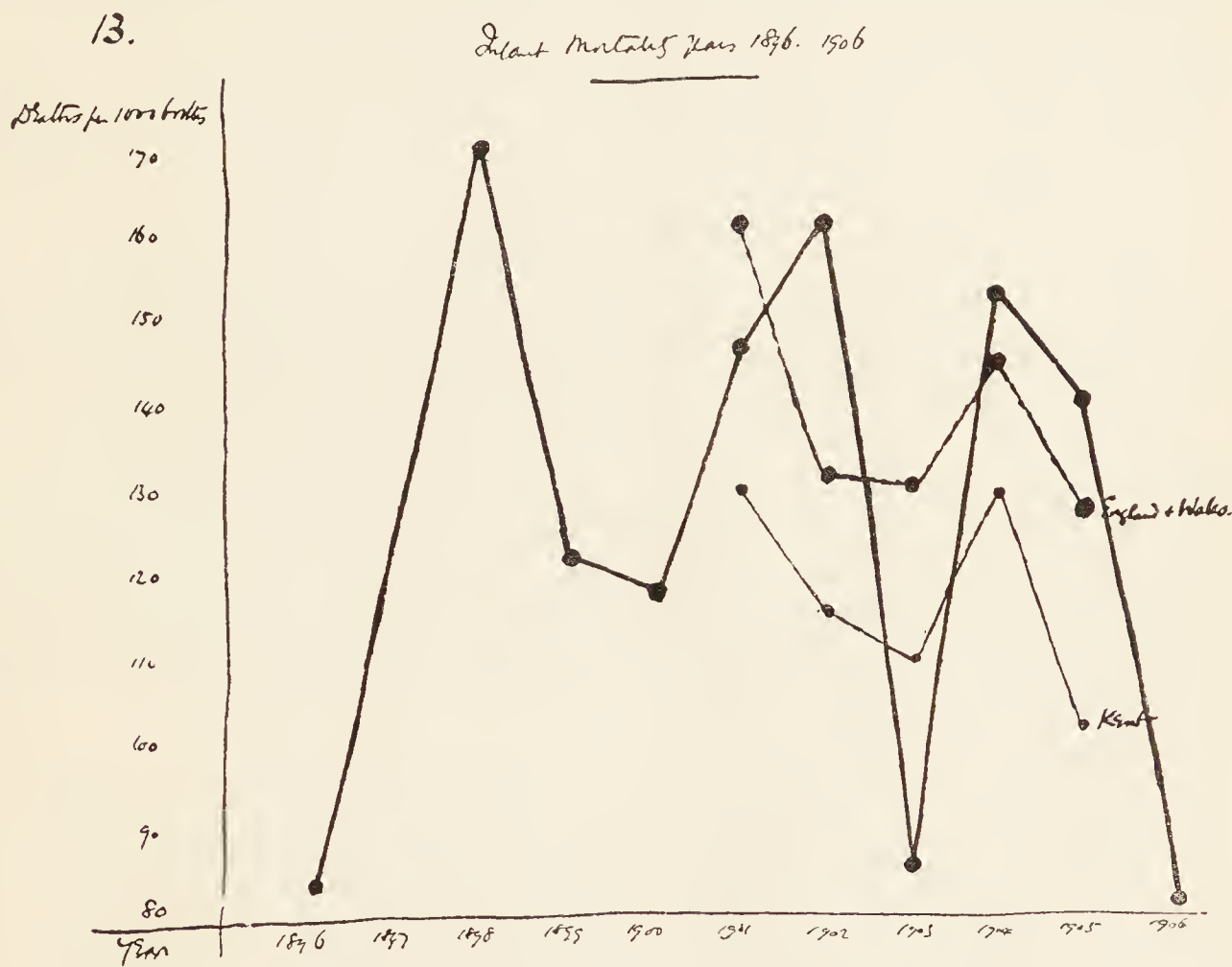
It has been many times demonstrated that animals injected from some samples of milk supplied to our large towns do develop Tuberculosis. Is it therefore not a scandal that this staple diet of Infants in their most susceptible age should be permitted to be sold in such a dangerous condition? Legislation is badly needed to enforce Inspection (periodi-



cally) of all Milch Cows by a competent Veterinary Surgeon. All suspicious cows to be isolated and all diseased to be slaughtered. By such inspection and elimination of affected animals the risk to the Infant consumers would be to a great extent alleviated.

INFANTILE MORTALITY.

This is the number of deaths of infants under 1 year of age per 1,000 population, and is often quoted as a measure of the sanitary condition of a district. The rate for the year 1906 is the lowest during the last 10 years, as is seen by the following table. The figures for the whole of England and Wales are also given for the last 5 years. Great variation is noticed in the curve due probably to climatic considerations. Infantile diarrhoea, one of the chief causes of infantile mortality, is more prevalent in hot and dry years.



SALE OF FOOD AND DRUGS ACT.

During 1906 in your District 46 samples of Foods and Drugs have been sent for analysis. In every case the samples were certified pure, with the exception of a sample of Whiskey taken at Rainham.

SANITARY INSPECTION.

The following Table, prepared by Mr. W. Leonard Grant, Sanitary Inspector, gives the work as far as it can be given in tabular form. A great proportion, however, of the routine work consists of House-to-House inspections, which is quite apart from the incidental inspections following upon complaints received. Special visits also have been made to places under the control of the Sanitary Authority, as Slaughter-Houses, Cowsheds, Dairies, Milkshops, Bakeries, Workshops, a well as to premises where infectious disease exists or has existed.

The House-to-House inspections during 1906 included Newington and great part of Rainham parishes. Only very few notices were outstanding at the end of the year.

## ABSTRACT OF CASES OF INSANITATION,

From January 1st to December 31st, 1906.

Foul Cesspools .. .. .	83
Foul Privies .. .. .	136
Defective Drains .. .. .	129
Defective Paving .. .. .	176
Defective Roofs, Guttering, &c. .. .. .	43
Dilapidated W.C.'s or Privies .. .. .	26
House Refuse .. .. .	105
Insufficient or Defective Water Supply .. .. .	57
Overcrowding .. .. .	11
Insufficient W.C. Accommodation .. .. .	31
Insanitary Houses .. .. .	10
Manure .. .. .	9
Pigs .. .. .	2
Total .. .. .	818

## SCHOOL WORK.

I am much indebted to the School Masters and Mistresses who so ably and conscientiously have notified to me any communicable diseases in their Schools. Forms were supplied to them for the purpose (see Page 23), and their help has been a great advantage to the work.

On July 17 I reported to the Council the need for the appointment by the Local Authority of a School Medical Officer for the district, which would not only ensure conformity of procedure as regards preventative, etc., and by the better attention to the excluded sick Children, but a better attendance would obtain with increased grant to the local School Authorities, and also very much lessen the roll of cases of communicable diseases in the Schools.

TABLE XIV.

CASES OF NON-NOTIFIABLE COMMUNICABLE DISEASES,  
as to Rural Schools, during 1906.

	Measles	Chicken Pox	Ring-worm	Sore Throat	Skin & other Diseases	Total
Bapchild .....	34	—	—	1	—	35
Bobbing .....	5	—	—	—	—	5
Borden .....	—	—	—	2	—	2
Bredgar.. .....	1	25	1	—	1	28
Halstow .....	—	—	—	9	—	9
Hartlip .....	1	—	—	—	—	1
Iwade .....	—	—	—	—	—	—
Kingsdown .....	—	—	—	—	—	—
Murston .....	23	3	5	—	17	48
Milsted .....	—	—	1	—	—	1
Newington .....	17	—	—	6	—	23
Rainham .....	4	17	11	31	—	63
Rodmersham .....	17	—	—	—	—	17
Upchurch .....	1	—	8	18	3	30
Total in Rural District	103	45	26	67	21	262

We see by Table XIV. that 262 cases of communicable disease among the School Children, which would otherwise have escaped my notice, were notified me from the Schools. This involved the writing of over 150 letters to the parents and also numerous visits to their homes.

Table XV. shows the School Closures which were necessary, in order to prevent the further spread of dangerous infectious disease. These closures became rare as the position of the Medical Officer of Health or School Medical Officer and the School Authorities becomes more definite.

TABLE XV.  
SCHOOL CLOSURES, during 1906, by Sanitary Authority.

School.	Disease	Date of Closure	Duration in days	Extension of Closure in days
Newington.....	Measles.....	May 30 ....	....19....	.....7
	Scarlet Fever	Nov. 12 ....	....14....	
Rodmersham .....	Measles.....	June 13 ....	....19....	
Murston, Infants' Department..	Measles.....	June 20 ....	....14....	
Bapchild .....	Measles.....	July 17.....	....20....	
Bredgar, Infants' Department..	Chicken Pox	July 24.....	....17....	
Rainham, National, Infants' Department .....	Scarlet Fever	Oct. 22.....	.... 7....	.....7
Rainham, Orchard Street, Infants' Department.....	Scarlet Fever	Nov. 3 .....	.... 9....	
Rainham, Chapel Branch ....	Scarlet Fever	Nov. 3 .....	.... 9....	
Upchurch, Mixed and Infants'	Scarlet Fever	Nov. 1 .....	....14....	
Lower Halstow .....	Scarlet Fever	Nov. 5 .....	....14....	

MILTON AND SITTINGBOURNE (MEDICAL OFFICER) JOINT COMMITTEE.  
Sittingbourne,  
.....190

School..... Department.....

FORM OF NOTIFICATION OF ALL COMMUNICABLE DISEASES TO  
MEDICAL OFFICER OF HEALTH.

Scholars' Name.	Home Address	Date of last Attendance at School.	Class.	Supposed nature of Illness.

Signature of Teacher or Attendance Officer,.....  
Date,.....

The need for more importance to be attached to Hygiene in connection with Schools is evidenced in this district by the percentage of School children having pediculi or lice in their heads. The following are the statistics of the condition of the heads of Children of school age admitted into the Keycol Hill Isolation Hospital during 1906:—

Total number of Children of School Age (5 to 14 years) ..... 56  
Number with clean heads ..... 15  
Number with vermin on heads .....41, or 73%



Most Skin Diseases are communicable and it is no uncommon thing to have a series of cases of Eczema of the scalp and face appear successively in the same class at a school.

Ringworm and the communicable diseases form a serious problem to School authorities. Children are absent for months with the complaints; often a doctor cannot be afforded and at last some chemist is consulted. A gain in grant would be derived from an early return to School of these cases.

Periodic medical examinations of all School Children should be made so that any tendency to disease or disease in its early stages may be discovered, instead of being aggravated by attendance at School. For instance, an early case of curvature of spine is possibly being aggravated by the position of the child at its desk, some abnormality in sight (which being detected early can be corrected) is being aggravated during School hours. During epidemics suspicious cases could be always examined with the suspected illness in view before readmission to School, and here the Medical Officer of Health, with his more intimate knowledge of the locality of notified infectious cases can often form a better judgment.

By examining all School Children, say, once yearly, and those known to the Teachers as being in any way defective, monthly, and by keeping a record of general physical conditions of eyes, ears, teeth, mental powers, vaccination, throats, hearts, skin disease, a great amount of good could be done to the community. In Germany a system of examination like this is worked with good results. Teachers and pupil teachers in order to be able to teach hygienic principles to the children should receive lectures from the School Medical Officer.

#### MIDWIVES ACT, 1902.

There are nine certified Midwives practising in this District. Only one is a properly trained Midwife, the others holding their certificates by virtue of being in practise in July, 1901. No irregularities occurred in the practice of any of them. On several occasions during the year it has been necessary to warn uncertified women, said to be acting as Midwives, of the penalty to which they are liable.